IS-6  Effect Of Na⁺ In The Uptake Of Tc-99m-MIBI: Comparison With Tc-99m-Tetrofosmin  

The effect of Na⁺ in the uptake of Tc-99m-MIBI was studied with primary culture of rat myocardial cells and the results were compared with that of Tc-99m-tetrofosmin.

The cells were equilibrated either in Na⁺ free containing or Na⁺ free buffers. The cells were treated with dimethyl amiloride (DMA), a Na⁺/H⁺ antiprotector, and monensin, an ionophore that stimulates Na⁺ accumulation inside the cell.

In Na⁺ free buffer, significant increased uptake of Tc-99m-MIBI was observed. Monensin stimulated the uptake of Tc-99m-MIBI but more in Na⁺ containing buffer. DMA inhibited the uptake of Tc-99m-MIBI, partially, even in the presence of monensin. No significant change of Tc-99m-tetrofosmin uptake was observed in Na⁺ free buffer, although DMA inhibited the uptake. However, DMA showed no inhibitory effect on Tc-99m-tetrofosmin uptake in presence of monensin.

Part of the uptake of Tc-99m-MIBI involves Na⁺/H⁺ antiprotector system and during its uptake Tc-99m-MIBI may behave as Na⁺ or its uptake may be related to intracellular Na⁺ concentration.

IS-7  COMPARISON OF SESTAMI B, TETROFOSMIN, AND Q12 RETENTION DURING VASODILATION IN PORCINE MYOCARDIUM  
(Technische Universität München, Germany)

The aim of this study was to evaluate the clinical usefulness of combined diagnosis of coronary artery calcification and myocardial ischemia in detecting CAD. The 34 patients were received electron beam computer tomography (EBT) and SPECT. Final diagnosis for CAD was based on the results of CAG. Diagnostic accuracy of EBT, SPECT and combined diagnosis of EBT and SPECT were statistically compared. Only in LAD lesion, a sensitivity of SPECT was improved by combined diagnosis but its specificity was sacrificed. There was no reason to combine results of SPECT and EBT as a screening test for detecting CAD before CAG is performed.